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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,062	01/24/2001	Hiroshi Tsuda	826.1669/JIM	2276

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EXAMINER

TO, BAOQUOC N

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Notice of Allowability

Application No.

09/768,062

Examiner

Baoquoc N To

Applicant(s)

TSUDA, HIROSHI

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/02/2004.
2. ☒ The allowed claim(s) is/are 1,3-15, 17-18,20,22-29, 31 and 33-34.
3. ☒ The drawings filed on 24 January 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


JEAN M. CORRIELUS
PRIMARY EXAMINER

DETAILED ACTION

1. 1, 3-15, 17-18, 20, 22-29 and 31-35 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with J. Randall Becker Reg. No. 30,358 on Monday 12/06/04.

Please amended claims as follow:

In claim 1, line 6, delete [and] and line 9 delete, [Uniform Resource Locators].

In claim 13, line 9, delete [Uniform Resource Locators] and line 12, delete [and].

In claim 15, line 10, delete [and] and line 13, delete [Uniform Resource locators].

In claim 17, line 7, delete [and] and line 10, delete [Uniform Resource locators].

In claim 18, line 12-13, delete [Uniform Resource locators] and line 14, delete [and].

In claim 20, line 6, delete [Uniform Resource Locators] and line 7, delete [and].

In claim 29, line 11, delete [Uniform Resource Locators] and 14, delete [and].

In claim 31, line 8, delete [Uniform Resource Locators] and line 9, delete [and].

Please cancel claim 32.

In claim 33, line delete [Uniform Resource Locators].

In claim 34, line 5, delete [Uniform Resource Locators] and line 6, delete [and]..

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Please cancel claim 35.

Allowable Subject Matter

3. Claims 1, 3-15, 17-18, 20, 22-29, 31 and 33-34 are allowed over prior art made of record.

The following is an examiner's statement of reasons for allowance:

In claims 1 and 20, none of the known prior art made of record alone or in combination neither teach or suggest "a URL similarity calculating unit calculating a URL similarity that is a text similarity character string of URLs that represent the location of the documents and that is an appearance of written characters of URLs wherein said link importance assigning unit calculates the link importance based on an inverse URL similarity and the link relation of the document, so that a link weight increase as URL similarity decreases" in conjunction with "a link importance assigning unit weighting the link relation and assigning link importance which indicates importance of the document based on the weighted link relation to the document; and an accessing unit accessing the document based on the link importance."

Claims 2-12 and 22-28 are depended on independent claim 1, therefore, they are allowed under the same reason.

In claim 15, none of the known prior art made of record alone in combination neither teach or suggest "URL similarity calculating unit calculating a URL similarity that is a similarity of character strings of URLs that represent the location of the documents and that is an appearance of written characters of URLs, wherein said link importance

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assigning unit calculates the link importance based on the URL similarity and the link relation of the document and

Wherein the link importance of each document is defined as a solution of the following simultaneous linear equation (1), assuming the C_q is constant (the lower limit of the importance that depends on each page) for each $p \in \text{DOC}$ and that when a page is linked to a page q , the link weight $lw(p, q)$ is defined by the formula (2);

$$W_q = C_q + \sum_{p \in \text{Ref}(q)} W_p * lw(p, q) \quad \dots \quad (1)$$

$$Lw(p, q) = \text{diff}(p, q) / \sum_{i \in \text{Ref}(p)} \text{diff}(p, i) = 1 / \frac{\text{sim}(p, q)}{\sum_{i \in \text{Ref}(p)} 1 / \text{sim}(p, i)} \quad \dots \quad (2)$$

Wherein $\text{DOC} = \{p_1, p_2, \dots, p_N\}$ is a set of documents calculated for the link importance; W_p is the link importance of the page p ; $\text{Ref}(p)$ is a set of pages linked from the page p ; $\text{Ref}(p)$ is a set of pages linking to the page p ; $\text{sim}(p, q)$ is the URL similarity of the pages p and q ; $\text{diff}(p, q) = 1 / \text{sim}(p, q)$ is the difference.” and in conjunction with “a link importance assigning unit weighting the link relation and assigning link importance which indicates importance of the document based on the weight link relation to the document and accessing unit accessing the document based on the link importance.”

Claim 14 is depended on dependent claim 1, therefore, it is allowed under the same reason.

In claim 15, none of the known prior art made of record alone in combination neither teach or suggest “a URL similarity calculating unit calculating a URL similarity that is text similarity of character string of URLs that represent the location of the documents and that is an appearance of written characters of URLs, wherein said link

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importance assigning unit calculates the link importance based on an inverse URL similarity and the link relation of the document, so that a link weight increases as URL similarity decreases” and in conjunction with a link importance assigning unit assigning a link importance to the document based on the link relation; a keyword extracting unit extracting a keyword from the document; an index creating unit creating an index for accessing the keyword based on pronunciation characters or spelling of the extracted keyword; and an accessing unit accessing document assigned the link importance corresponding to the keyword when the pronunciation characters or spelling of the keyword are selected from the index.”

Claim 17 is allowed under the same reason as to claim 15 and “a link importance assigning unit assigning a link importance to the document depending on whether or not URLs of the documents are similar”

As to claims 18, 29 and 31, none of the known prior art made of record alone in combination neither teach or suggest “a link importance assigning unit assigning a link importance as an importance calculated based on the link relation of the document, wherein the said link importance assigning unit calculates the link importance based on an inverse URL similarity and the link relation of the document, so that a link weight increases as URL similarity decreases” in conjunction with “a collecting unit collecting the documents from a network; a URL character string determining unit determining a URL having a particular characteristic of a character string from the documents; an index creating unit creating a link list for listing less than a predetermined number of links to the documents based on the link importance and the particular characteristic of

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the character string of the URL, wherein said index creating unit selects the document based on the document type and creates a link list of the selected document; and document type determining unit determining a document type based on a URL similarity representing a text similarity between character string of URLs of the documents and being an appearance of written characters of URLs, the number of links to the document, and the number of links from the document.”

As to claims 33 and 34, none of the known prior art made of record alone in combination neither teach or suggest “a link importance assigning unit weighting the link relation and assigning link importance which indicates importance of the document based on the weighted link relation to the document, said link importance assigning unit comprising calculating unit calculating a URL similarity that is a similarity URLs that represent the location of the documents and that is an appearance of written characters of URLs and said link importance assigning unit calculates the link importance based on an inverse URL similarity and the link relation of the document, so that a link weight increases as URL similarity decreases; and an accessing unit accessing the document based on the link importance.”

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

NPL

Koganezawa, K (Redunancy resolution for robot manipulators-com of computational efficiency between the SVDs, the similarity factorization and recursive formatulation), Computational Intelligence in Robotics and Auto 2001, pages 89-95.

Taher et a. (Evaluating Strategies for Simirality Search on the web), ACM Computing Surveys, pages 469-503, year 2002.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

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(703) 872-9306 [Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II

2121 Crystal Drive

Arlington, VA 22202

Fourth Floor (Receptionist).

Baoquoc N. To

Dec 08, 2004



JEAN M. CORRIELLUS
PRIMARY EXAMINER